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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,952	12/27/2001	Jacques Debiez	2001-072-TOU	9352
7590	06/15/2005		EXAMINER	
Wayne P. Bailey Storage Technology Corporation One StorageTek Drive, MS-4309 Louisville, CO 80028-4309			SCHUBERT, KEVIN R	
			ART UNIT	PAPER NUMBER
			2137	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,952	DEBIEZ ET AL.	
	Examiner	Art Unit	
	Kevin Schubert	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 May 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claims 1-13 have been considered.

Claim Rejections - 35 USC § 103

5 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15 Claims 1-2,4-6, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl, U.S. Patent No. 6,530,023, in view of Hartman, U.S. Patent No. 5,500,897.

As per claim 1, the applicant describes a trusted high stability time source for use with a digital time stamping service and a trusted external time source comprising the following limitations which are met by Nissl in view of Hartman:

20 a) a private time source indicating a private time (Nissl: Col 7, lines 29-40);
b) a published time source indicating a published time (Nissl: Col 7, lines 29-40; Col 4, lines 56-67);
c) at least one power supply arranged to power the private time source and the published time source (Nissl: Col 7, lines 34-36);
25 d) control logic programmed to perform a time stamping operation by receiving a message, appending the published time to the message to create a timestamp, and digitally signing the timestamp with a private key (Nissl: Col 5, lines 13-18);
e) the control logic being further programmed to perform a published time source update by sending a request to the trusted external time source for a published time update, receiving a reply from 30 the trusted external time source including the published time update, and updating the published time with

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the published time update if an update condition is satisfied, wherein the update condition is based in part on a time difference between the private time and the published time update (Nissl: Col 7, lines 29-40; Hartman: Col 3, lines 2-7);

Nissl discloses a time validation system in which a computer utilizes a PC plug-in card to produce
5 accurate timestamps.

Nissl does not disclose the idea of sending a request to the external time source for a time update. In Nissl's system, the time is updated automatically. This is because Nissl's system discloses the use of the DCF77 signal, which is constantly transmitted. Hartman discloses the idea that a client can request a time update from a trusted server. It would have been obvious to one of ordinary skill in the art
10 at the time the invention was filed to incorporate the ideas of Hartman with those of Nissl because doing so allows a client to receive a time update in a system in which the time updates are not sent automatically.

As per claim 2, the applicant describes the time source of claim 1, which is met by Nissl in view of
15 Hartman (see above), with the following limitation which is met by Nissl:

A printed circuit board including a connector for connecting to a bus of a computer, wherein the private time source, the published time source, the at least one power supply, and the control logic are mounted to the printed circuit board (Nissl: 25 of Fig 6);

The circuit board is the PC Plug-in card. The private time source is the internal real time clock.
20 The published time source is the stored last published time update.

As per claim 4, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Hartman:

Wherein the control logic is programmed to perform the published time source update at least
25 once per month (Hartman: Col 3, lines 2-7);

As described by Hartman, the time updates can occur at any prescribed regular time interval.

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As per claim 5, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

Wherein the update condition is not satisfied when the time difference between the private time and the published time update is greater than 6 hours (Col 7, lines 29-40);

5 The update condition is not satisfied when the difference between the time update from the external source and the private time exceeds a threshold which can be any value, including greater than 6 hours.

As per claim 6, the applicant describes the time source of claim 1, which is met by Nissl in view of 10 Hartman (see above), with the following limitation which is met by Nissl:

Wherein the control logic updates the published time with the published time update in an update manner that is based on a time difference between the published time and the published time update (Nissl: Col 7, lines 29-40);

15 In this example the published time update is the DCF77 and the published time is the internally stored previously published time (tE). The published time update has to be greater than the stored published time in order for the time stamping operation to take place.

As per claims 11 and 12, the applicant describes the time source of claims 1 and 11, which are met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

20 Wherein the control logic is further programmed to compare the private time with the published time to determine a time difference, and to indicate that the trusted high stability time source has expired when the time difference exceeds a predetermined threshold (Nissl: Col 7, lines 29-40).

The threshold can be any value, including 6 hours.

25 As per claim 13, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

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A tamperproof enclosure encapsulating the private time source, the published time source, and the control logic (Nissl: Col 11, line 3 to Col 12, line 2).

Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl in view of Hartman in further view of Esker, U.S. Patent No. 6,236,277.

As per claim 3, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Esker:

- 10 a) a first crystal oscillator configured to stabilize the private time source (Esker: Col 7, lines 3-11);
b) a second crystal oscillator configured to stabilize the published time source (Esker: Col 7, lines 3-11);

Nissl in view of Hartman disclose all the limitations of claim 1. However, Nissl in view of Hartman fail to disclose that the private time source, or internal time source, and the published time source, or external time source of the DCF77 signal, have crystal oscillators.

15 Esker discloses a time updating system in which a local clock and a master clock both run off of crystal oscillators. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Esker with those of Nissl in view of Hartman because using a crystal oscillator is a common way of maintaining a clock.

20 As per claim 7, the applicant describes the time source of claim 6, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Esker:

Wherein the update manner is a normal update manner when the time difference between the published time and the published time update is not greater than 5 seconds, otherwise, the update manner is a slow update manner (Esker: Col 2, lines 25-35);

25 Nissl in view of Hartman disclose all the limitations of claim 6. However, Nissl in view of Hartman fail to disclose the use of updating the clock in a slow manner.

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Esker discloses the idea of slowly updating a clock of the time difference is great (though Esker does not necessarily disclose 5 seconds). It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Esker with those of Nissl in view of Hartman and update the clock in a slow manner because doing so assures that a large clock deviation is incrementally corrected in order to prevent huge time disparities.

As per claim 8, the applicant describes the time source of claim 7, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Esker:

Wherein the control logic is programmed to perform the published time source update once per 10 day (Esker: Col 2, lines 25-35);

Esker discloses that the correction is applied at regular intervals. The regular intervals could be once per day.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl in view of 15 Hartman in further view of Watson, U.S. Patent No. 6,775,704.

As per claims 9 and 10, the applicant describes the time source of claims 1 and 9, which are met by Nissl in view of Hartman (see above), with the following limitation which is met by Watson:

Wherein the update condition is further based on an elapsed time between sending the request 20 and receiving the reply (Watson: Col 7, lines 29-32);

Nissl in view of Hartman disclose all the limitations of claim 1. However, Nissl in view of Hartman fail to disclose the idea that the update condition is based on an elapsed time between sending the request and receiving the reply.

Watson discloses the idea that a message is sent with a timestamp which is used to make sure 25 that a message was not sent more than 5 to 20 seconds after it is received.

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Watson with those of Nissl in view of Hartman and incorporate the use of monitoring

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the elapsed time from when a request was sent to when the reply is received so that reply attacks do not occur.

Response to Arguments

5 Applicant's arguments, see Remarks filed 5/31/05, with respect to claim 1 have been fully considered but they are not persuasive. The applicant argues that Nissl does not disclose the limitations of claim 1. The examiner disagrees. Nissl discloses a time stamping system which contains an internal clock running off an internal battery which provides a private time source (parts a and c). The system also contains an external time source which is a published time source indicating a published time

10 source. In a preferred embodiment of Nissl, the external time source which is a published time source is Germany's FPTA which broadcasts the DCF77 time signal at 77khz (part b). Nissl's system also discloses that when a time stamping operation is about to take place on a received message, a published time is received from the external time source which is a published time source and if the published time is within a threshold, the published time (DCF77) is used to timestamp the document (part d). The

15 published time is then stored internally as the last valid time signal received in the system. The stored published time is a published time source indicating a published time (this also meets part b). As to the applicant's argument that the published time is not used in the time stamping operation on page 1 of the Remarks, the examiner entirely disagrees (see Nissl: Col 7, lines 40-41).

Finally, Nissl discloses that updating of the stored published time is done whenever a new published time is received. For example, when a new DCF77 is received, such as the case when a time stamping operation is about to take place, the new DCF77 is used to validate the last valid published time received and thereby provide a new published time source internally if an update condition is satisfied. This update condition can be a tolerance difference between the new DCF77 and the internal private time (part e). Nissl does not disclose the use of sending a request to the trusted external time source for a

25 published time update. This is met by Hartman.

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Applicant's arguments with respect to claim 2 have been fully considered but they are not persuasive. The applicant argues that Nissl only describes an internal time source that is updated using an external time source. The examiner disagrees. Nissl explicitly describes a PC plug-in card (printed circuit board) which has an internal clock (private time source) and memory for storing the last valid published time received. The stored last valid published time source is updated whenever a new published time is received (Col 4, lines 63-66). Moreover, the stored last valid published time is a time source.

Conclusion

10 **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH 15 shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should 20 be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should 5 you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ANDREW CALDWELL
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